Space News NASA ROUNDUP!

VOL. 37 NO. 9 | Lyndon B. Johnson Space Center, Houston, Texas | May 8, 1998

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Improved suit gives Virginia boy 'freedom'

By Audrey Schwartz Rivers

Like an astronaut who just stepped foot on a new world, a 6-year-old Virginia Beach, Va., boy explored Earth for the first time, thanks to improved NASA technology.

On April 19, Mikie Walker became the first American child to receive a modified "space suit" that protects him from ultraviolet rays of the Sun and other light sources. Mikie has porphryia, a genetic disorder that causes extreme and potentially dangerous sensitivity to sunlight that can result in chronic skin inflammation and blistering, inflammation of nerves, abdominal pain and other disturbances. For some children with light sensitivity disorders, even a 40-watt light bulb spells danger.

JSC's Office of Technology Transfer and Commercialization offered the suit to Mikie through an agreement with the non-profit HED Foundation, Hampton, Va.

"To think that NASA astronauts walking on the Moon means a child now can play in the Sun," said Sarah Moody, founder and president of the HED Foundation and Related Disorders which has worked with JSC's Office of Technology Transfer and Commercialization to provide the protective garments to needy children. The HED Foundation donates cooling gear to children with hypohidrotic ectodermal dysplasia (HED), multiple sclerosis, spina bifida, cerebral palsy and other genetic disorders. HED is a medical disorder characterized by a lack of sweat glands that can lead to heat exhaustion, heatstroke and, in severe cases, death. Several thousand children worldwide suffer from genetic disorders that cause either extreme light sensitivity or problems with body cooling. Thirty children are on the foundation's waiting list for a suit like Mikie's.

The pint-sized space suit blocks nearly all of the Sun's ultraviolet rays. Mikie sports an improved version of a prototype protective suit JSC provid-

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NASA Photo S90E5085

Payload Specialist Jay Buckey, right, helps Payload Commander Rick Linnehan with a sleep cap. Several electrodes in the cap make contact with the skull to monitor electrical impulses from the brain during sleep and an electrode under the nose monitors respiration. The cap also monitors and measures electrical impulses from the muscles, eyes and heart as part of a study of astronaut sleep patterns in space. Associated with the experiment were waking tests of the astronauts breathing patterns and blood gasses.

Neurolab crew brings home gain on brain

Following more than two weeks of on-orbit research designed to gain insight into the human nervous system, the STS-90 crew flying aboard *Columbia* returned to Kennedy Space Center on May 3.

Columbia touched down on KSC's three mile-long concrete runway at 11:09 a.m. CDT with the Neurolab crew—Commander Rick Searfoss, Pilot Scott Altman, Mission Specialists Rick Linnehan, Kay Hire and Dave Williams along with Payload Specialists Jay Buckey and Jim Pawelczyk—bringing back volumes of information gathered from the more than two dozen experiments they performed during the flight.

Following an overnight stay at the Florida spaceport, the STS-90 crew flew back to Ellington Field on Monday.

Joining family, friends and coworkers to welcome home *Columbia*'s crew were hundreds of third and fourth graders from the Friendswood school system, which "adopted" the mission in its studies and made several field trip visits to JSC.

During their 16-day mission, the astronauts research efforts were monitored by eight science teams. Four teams with a combined total of 11 experiments used the astronauts as test subjects while the other four teams, through 15 different experiments, used a variety of animals as part of their data collection.

"Although the Spacelab flight is over," reported Neurolab Mission Scientist Jerry Homick, "the Neurolab program activities are far from completed. A significant amount of essential post-flight data is to be collected on both the crew members and animal test subjects … and data analysis will continue for several weeks."

All of the teams studying human subjects reported receiving good data on their studies of how microgravity affects blood pressure regulation, eye-hand coordination, motor coordination, sleep disruption and the balance system of the inner ear.

The teams using animals included the Aquatic, Neuronal Plasticity, Mammalian Development and Neurobiology. The Aquatic team studying the Oyster

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Saturn leader keys on training

Low lecturer credits line's success to customer focus

By Kelly Humphries

The man who helped launch General Motors' newest lines of cars and management told JSC managers recently that establishing core values, educating potential leaders and recognizing implementers are the keys to his company's recent resurgence.

Richard "Skip" LeFauve, former chairman of the Saturn Corp., and now GM senior vice president for global leadership development and global human resources processes, spoke to a packed Gilruth Center ballroom on April 22 as part of the George M. Low Leadership Series of lectures hosted by JSC Director George Abbey.

LeFauve said that when he took the reins of the new car company, named for the Saturn V rocket that "leapfrogged" the United States over the Soviet Union in the space race, it was an experiment that GM management and the United Auto Workers union leadership hoped would turn around the giant automaker's slumping profits in the face of stiff overseas competition and point the way toward a new way of doing business. This means letting the union be involved in decisions such as engineering and picking advertising companies. The idea was to shift the roles of management and workers so that everyone focused on the customer and shared responsibility for the company's success or failure.

"The most important thing we learned is how important people are to success in any enterprise," said LeFauve, who also is president of

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High school students taste thrill of zero-g

By Donn Sickorez

Tucked away in the back of the KC-135, four high school students and their teachers listen to the roar of the KC-135's engines as it gains altitude over the Gulf. This was it. Months of planning, preparation, meetings and weekend work has come to this moment.

Test Director Judy Rickard calls out "30 seconds" and the students do what they can to prepare themselves and their experiments for their first experience of weightlessness. As the engines' shout dissolves to a whis-

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JSC Photo 98E03368

Holly Hyde, left, an instructor from Clear Creek Independent School District, assists a student studying EVA construction activities as a part of the Fly High Program—JSC's pilot project to fly high school researchers on the KC-135 research aircraft.

JSC making big plans for Inspection '98

A team of employees is working on plans for Inspection '98, scheduled in October.

JSC will invite business, industry, community and education leaders to inspect the facilities and technologies that are used to achieve the science, engineering, management and operations goals of the center.

Organizers will be making a call to submit exhibit proposals in the next several weeks.

For additional information on Inspection '98 or to volunteer, call Kathy Jurica at x34776.